REMARKS

This is in response to the final Office Action mailed September 10, 2002 and the Advisory Action mailed November 29, 2002. Applicant respectfully traverses and request reconsideration.

Claims 1-9, 14 and 17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,359,702 ("Mukai").

Regarding claims 7, 14 and 17, Applicant respectfully traverses and asserts the rejection as moot as these claims have herein been cancelled, without prejudice.

Mukai teaches, *inter alia*, an image signal interface system for converting an analog image signal to a digital image signal, a table memory for storing attribute data and a control unit for reading the attribute data from the table memory and controlling the conversion of the image signal based on the attribute data. More specifically, Mukai teaches, *inter alia*, a medical image recording system having four different types of image signals, 12A-12D, wherein each of the image signals sources has a CRT for displaying an image. Each of the image signals further include control signals D_A-D_D which are image control series signals provided to an image signal interface system. An A/D converter is supplied with attribute data, such as data on sampling frequencies for the video signals S_A-S_D through a control unit. The A/D converter converts the video signals S_A-S_D to digital videos based on the supplied attribute data. The attribute data is stored as a device table, such as element 30A. Mukai teaches, among other things, the device table 30A contains channels CH0-CH3 which correspond to the contacts 19A-19D and 21A-21D of the electronic switches 18 and 20. The attribute data in the device table 30A is selected according to the number of a channel which is entered through a control panel manually by an operator, such as a doctor, and stored into a device table memory. The digital image from the A/D converter is stored one frame at a time in a frame memory and are converted by a lookup table setting unit 40 which affects gamma correction image signals. The lookup table setting unit 40 stores a gamma correcting table which is generated by the control unit 26 and a lookup table generator 44. The gamma correcting table is generated on the basis of control information introduced from the communication interface 24 in response to which one of the four channels of image signal sources is supplied to the A/D converter. Mukai teaches, *inter alia*, generating a

single gamma correction table and storing the single gamma correcting table in a gamma correcting table memory, wherein the gamma correction table is generated in response to the communication interface 24 in response to a determination by a controller, such as a doctor, manually determining which channel, CH0-CH3 is activated and stored in the device table memory.

Mukai further teaches, *inter alia*, that multiple gamma correcting tables 100A-100D for use with video signals S_A-S_D are stored in an external memory, such as a floppy disk. Based on information within the control unit from the communication interface, among other things, the control unit determines which one of the gamma correcting tables to utilize for providing a gamma correction for the image within the frame memory 38 to the output interface 42. More specifically, Mukai teaches, *inter alia*, that the specific gamma correcting table is chosen in response to "the number of a channel CH which is entered through a control panel 32 by the operator, such as a doctor, and stored into a device table memory 34" col. 4, lines 51-53.

Moreover, Mukai states that:

> "the control unit 26 fetches the desired data from the device table 30A stored in the external memory 28 based on the channel number entered from the control panel 32, and stores the fetch data into the device table memory 34. If the channel 0 corresponds to the image signal source 12A, then attribute data such as the sampling frequency P, the horizontal input period TH, the vertical input period TV corresponding with the channel 0 are stored as the video table 36 in the device table memory. Also, the gamma correcting table 100A corresponding to the channel 0 is fetched from the device table 30D and stored in the gamma correcting table 46." Col. 6, lines 43-54.

As such, Mukai requires an operator to physically enter a specific channel request and that specifically manually entered channel request thereupon determines which gamma correcting table is provided.

Regarding claim 1, Applicant respectfully submits that the amendment to claim 1 is proper, in view of the response after final. Claim 1 has been amended to add the clarifying language stating that "wherein the automatic selection of the set of output data is based on gamma selection information." This limitation is previously asserted, but Applicant has amended claim 1 to provide more succinct clarification providing that the automatic selection is based on gamma selection information. Claim 1 also provides, *inter alia*, "a gamma table selector that receives the set of output data and automatically selects the set of output data." It is

respectfully submitted that the present amendment of including the limitation of receiving the set of output data does not add any new matter nor does it require the Examiner to conduct any further searching. This limitation is inherently contained therein within the claim as originally presented and examined with regards to the previous non-final Office Action. As clearly illustrated in FIG. 2, the gamma correction lookup table 30 provides plurality of output data, shown as gamma = 1.0, gamma = 1.4, and gamma = 1.7 to the gamma table selector 40. It is further submitted that this limitation is inherently contained therein in the claim as originally presented because the gamma table selector could not automatically select the set of output data corresponding to one of the plurality of lookup tables without receiving the set of output data and as such the present amendment is not narrowing in nature, but merely a further delineation of inherently contained features herein. Applicant respectfully requests the entrance of the above amendment and the passage of this claim to issuance. Applicant further respectfully submits that the amendment is not narrowing in nature, and if the Examiner feels that this is a narrowing amendment, Applicant respectfully requests an explicit statement from the Examiner asserting this position.

Regarding the present rejection of claim 1, Applicant respectfully appreciates the Examiner's thoroughness in the final Office Action mailed September 10, 2002. The Examiner asserts on page 6, under sub-section 2 in the response to argument section that "Mukai discloses a user selecting a device that will be used to transmit a source signal along with a control signal (col. 4, ll. 23-41) in a table setting unit that automatically selects one of a plurality of gamma tables based on data in a control unit that specifies the gamma information to be selected (col. 4-5, ll. 60-6)." Applicant respectfully traverses the Examiner's position and asserts that Mukai fails to disclose receiving the set of output data, where the set of output data is provided from each of a plurality of lookup tables in response to received input data. More specifically, Mukai discloses a system, among other things, wherein the user selects which specific gamma correction lookup table is to be utilized, and a single set of output data is provided for gamma correction. Claim 1, as amended, claims the gamma table selector receiving the set of output data, wherein the set of output data is defined within the specification as being a plurality of sets of gamma corrected data. As stated in previous Office Actions, while Applicant appreciates the Examiner's assertion of Mukai, it is respectfully submitted that Mukai teaches a completely different system operating in a completely different manner.

It is respectfully submitted that Mukai fails to disclose, among other things, the gamma table selector that "receives the set of output data and automatically selects the set of output data corresponding to one of the plurality of lookup tables, wherein the automatically selection of output data is based on gamma selection information." While it is appreciated that Mukai teaches a selection information which is provided from a user, it is respectfully submitted that Mukai fails to disclose, *inter alia*, the claimed gamma table selector that "receives the set of output data and automatically selects the set of output data corresponding to one of the plurality of lookup tables."

Regarding claims 2-5, Applicant respectfully submits that these claims contain further patentable subject matter not disclosed by Mukai. For example, claim 4 claims, among other things, the gamma table selector further comprising a multiplexor that receives a set of output data from a plurality of gamma correction lookup tables and wherein the multiplexor selects a selected set of output data from the sets of output data based on the gamma selection information. As stated above, Mukai teaches, *inter alia*, control unit 26 determining which gamma correction table provides the lookup table generator 44 in response to the communication interface determining which channel, channel 0-channel 3, have been manually activated by a controller.

Therefore, Applicant respectfully requests reconsideration and withdrawal of the present rejection regarding claims 1-5. Furthermore, Applicant respectfully resubmits that the amendment of claim 1 is not narrowing in nature and that the claimed limitation of "receives the set of output data" is inherently contained in the claim, as originally filed. As such, should the Examiner uphold the present rejection, Applicant respectfully requests a showing of where Mukai discloses receiving the set of output data, wherein the set of output data is defined, as claimed in claims 1-5.

Regarding claims 6, and 8-9, Applicant respectfully submits that these claims are allowable in view of Mukai. Applicant respectfully resubmits the above position offered with regards to claim 1 and further submits that the amendment to claims 6 and 8-9, including the limitation of the selection block receiving the plurality of sets of gamma corrected data is not narrowing in nature, nor does it add any new patentable subject matter, which would require the

Examiner to conduct further searching. It is respectfully submitted that this limitation is already inherently contained herein, as in the selection block must receive the pluralities of sets of gamma corrected data to perform the step of "select[ing] a selected data set from the plurality of gamma corrected data sets." As such, Applicant requests the entrance of the amendments of claims 6 and 8-9 and respectfully submits that these are not narrowing in nature. Should the Examiner feel that the amendments are narrowing in nature, Applicant respectfully requests a statement asserting the Examiner's position.

Applicant respectfully resubmits the above position that Mukai fails to disclose, *inter alia*, receiving the sets of gamma corrected data, but rather discloses only receiving a single set of gamma corrected data which is provided to the gamma correcting table 46. Moreover, Mukai discloses that "the lookup table generator 44 does not process the generated gamma correcting tables 100a through 100d any further, and stores one of these gamma correcting tables 100a through 1003 depending on a selected one of the image signal sources 12a through 10d as a lookup table in the lookup table setting unit 40." (emphasis added) (col. 6, lines 28-33) As such, Applicant respectfully submits that claims 6 and 8-9 are allowable in view of Mukai. Applicant respectfully requests reconsideration and withdrawal of the present rejection and the passage of these claims to issuance.

Applicant respectfully submits added claims 20-22 for the Examiner's consideration. It is respectfully submitted that these claims do not add any new subject matter, which would require the Examiner to conduct any further searching. Rather, claim 20 presents a new claim for consideration incorporating the originally presented elements of claims 14 and 15, wherein the Examiner has indicated claim 15 as being allowable. Claim 21 presents for the Examiner's consideration the elements previously submitted in claims 14 and 16, wherein the Examiner has indicated the elements of claim 16 are allowable. Moreover, claim 22 presents for the Examiner's consideration the elements of previously submitted claims 17 and 18, wherein the Examiner has indicated that claim 18 stands allowable in view of the prior art of record. Therefore, Applicant respectfully requests the entrance of these claims and the passage of these claims to issuance. Moreover, Applicant respectfully submits that the amendment of adding claims 20-22 is not narrowing in nature, but merely a further delineation of already claimed

subject matter presented for the Examiner's review. If the Examiner feel that these amendments are narrowing in nature, Applicant expressly requests a statement asserting this position.

Claims 15-16 and 18 originally stand objected to as being dependent upon a rejected base claim. In view of the cancellation of 15-16 and 18, Applicant respectfully submits this objection is no longer proper.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned: "Version with Markings to Show Changes Made."

Accordingly, Applicant respectfully submits that the claims are in condition for allowance and that a timely Notice of Allowance be issued in this case. The Examiner is invited to contact the below-listed attorney if the Examiner believes that a telephone conference will advance the prosecution of this application.

Respectfully submitted,

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Version with Markings to Show Changes Made

In the claims:

Please cancel claims 7 and 14-18 without prejudice.

Please amend claims 1, 6, and 8-9 and add claims 20-22 to read as follows:

1. (Twice Amended) A gamma correction circuit, comprising:

a plurality of gamma correction lookup tables corresponding to a plurality of gamma values, wherein each of the plurality of lookup tables provides a set of output data in response to received input data; and

a gamma table selector that receives the set of output data and automatically selects the set of output data corresponding to one of the plurality of lookup tables, wherein the automatic selection of the set of output data is based on gamma selection information.

6. (Amended) A gamma correction block, comprising:

a gamma correction lookup table, wherein the gamma correction lookup table stores gamma correction data corresponding to a plurality of gamma correction curves, wherein the gamma correction lookup table provides a plurality of sets of gamma corrected data in response to a set of input data, wherein the plurality of sets of gamma corrected data includes a set of gamma corrected data for each of the plurality of gamma correction curves; and

a selection block operably coupled to the gamma correction lookup table, such that the selection block automatically receives the plurality of sets of gamma corrected data and selects a selected set of gamma corrected data from the plurality of sets of gamma corrected data based on a gamma selection information.

8. (Amended) A gamma correction circuit comprising:

a lookup table that stores gamma corrected data corresponding to a plurality of gamma correction curves, wherein the lookup table receives input signals that

select a plurality of gamma corrected data sets from the lookup table, wherein a first portion of the input signals select a portion of the plurality of gamma correction curves, and wherein a second portion of the input signals selects the plurality of gamma corrected data sets from the portion of the plurality of gamma correction curves;

a selection block operably coupled to the lookup table, wherein the selection block receives selection signals and the plurality of gamma corrected data sets and selects a selected data set from the plurality of gamma corrected data sets.

9. (Amended) A gamma correction circuit comprising:

means for storing a plurality of gamma corrected data sets corresponding to a plurality of gamma correction curves, wherein the plurality of gamma corrected data sets are precomputed; and

means[,operably coupled to the means for storing,] for selecting a gamma corrected data set based on curve information, wherein the means for selecting is operably coupled to the means for storing such that means for storing provides the plurality of gamma corrected data sets to the means for selecting, such that the means for selecting [that] selects a selected curve from the plurality of gamma correction curves and position information that selects the gamma corrected data set at a corresponding position on the selected curve.

20. (Added 12/06/02) A video graphics circuit comprising:

a frame buffer, wherein the frame buffers stores display information;

a gamma correction block operably coupled to the frame buffer wherein the gamma correction block stores a plurality of sets of precomputed gamma corrected data corresponding to a plurality of gamma correction curves, wherein the gamma correction block receives the display information and gamma selection information, wherein the gamma correction block provides gamma corrected data in response to the display information from a gamma correction curve selected by the gamma selection information; and

a digital to analog converter operably coupled to the gamma correction block, wherein the digital to analog converter receives the gamma corrected data and generates an analog display signal.

21. (Added 12/06/02) A video graphics circuit comprising:

a frame buffer, wherein the frame buffers stores display information;

a gamma correction block operably coupled to the frame buffer wherein the gamma correction block stores a plurality of sets of precomputed gamma corrected data corresponding to a plurality of gamma correction curves, wherein the gamma correction block receives the display information and gamma selection information, wherein the gamma correction block provides gamma corrected data in response to the display information from a gamma correction curve selected by the gamma selection information; and

a video graphics processor operably coupled to the frame buffer, wherein the video graphics processor generates at least a portion of the display information stored in the frame buffer.

22. (Added 12/06/02) A method for gamma correction in a video graphics system, comprising:

receiving pixel information;

selecting a set of gamma corrected data from a plurality of sets of precomputed gamma corrected data based on the pixel information and gamma selection information, wherein the plurality of sets of precomputed gamma corrected data include gamma corrected data corresponding to a plurality of gamma correction curves; and

converting the set of gamma corrected data from a digital format to a portion of an analog display signal.